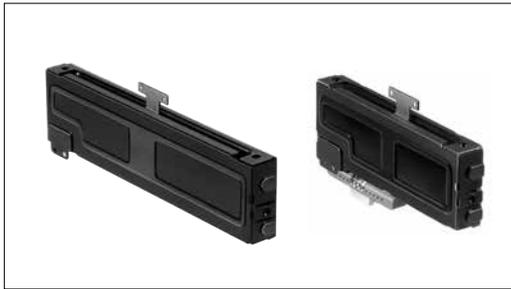


Minimum lever wobble and high precision characteristics
combined with good operational feel



Typical Specifications



Items	Specifications
Total resistance tolerance	±20%
Maximum operating voltage	350V AC, 20V DC
Operating force	Please see P.399
Operating life	Please see P.399
Operating temperature range	-10°C to +60°C

Product Line

Type	Number of resistor elements	Travel (mm)	Lever type	Length of lever (mm)	Total resistance (k Ω)	Resistance taper	Minimum order unit (pcs.)		Products No.	Drawing No.
							Japan	Export		
Standard Type	Single-unit	60	9-T (T-Bar)	8.2	10	15A	50	100	RS60K11A9010	1
		100							RSA0K11A901L	2
Dual-unit	1		12	RSA0K12A1013					3	
CP Type		Single-unit		60					9-T (T-Bar)	8.2
	100		RSA0K11K9A16	5						
		Dual-unit	RSA0K12K9A14	6						

Note

Other varieties are also available. Refer to "Other Specifications" (P.399).

Packing Specifications

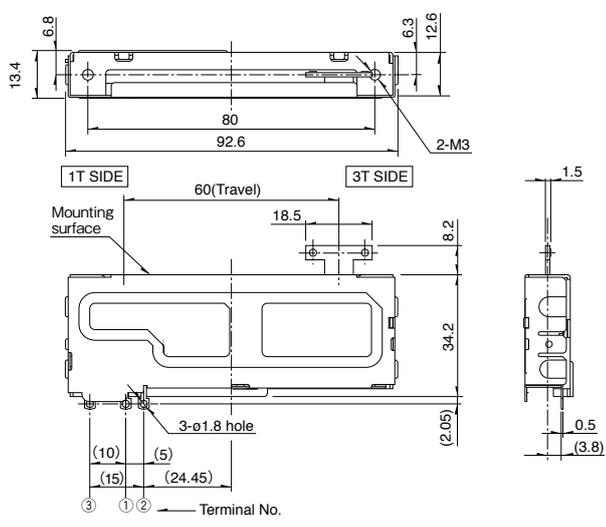
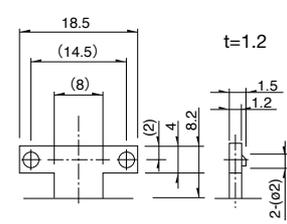
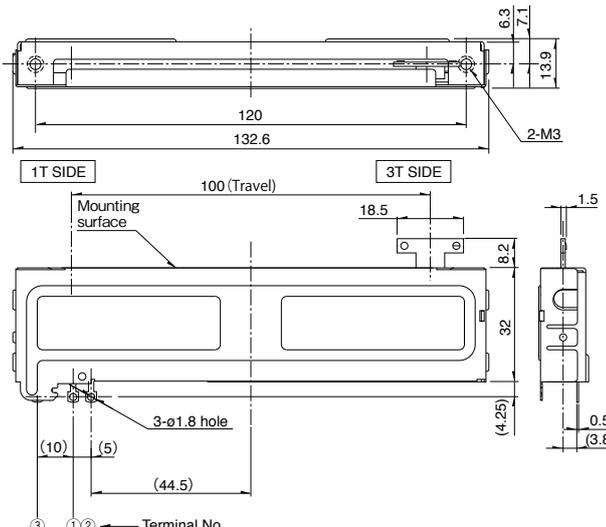
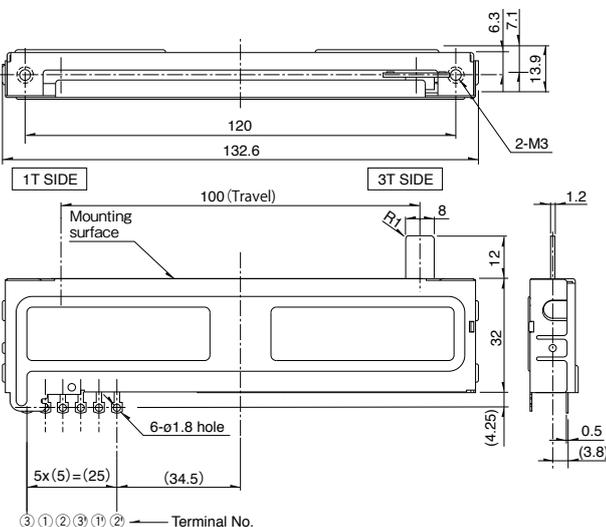
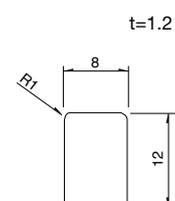
Bulk

Travel (mm)	Number of packages (pcs.)		Export package measurements (mm)
	1 case /Japan	1 case /export packing	
60	50	100	524×296×196
100	50	100	524×374×201

Refer to P.399 for other specifications.
Refer to P.399 for details of lever types.
Refer to P.400 for ordering products not listed.
Refer to P.417 for soldering conditions.

Dimensions

Unit:mm

No.	Style	
1		
2		
3		

Rotary Potentiometers

Slide Potentiometers

General-use

Mixer

Dimensions

Unit:mm

No.	Style	
4		
5		
6		

Rotary Potentiometers

Slide Potentiometers

General-use Mixer

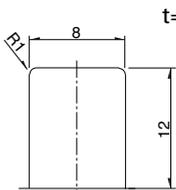
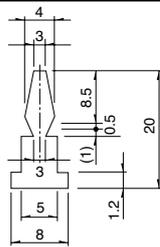
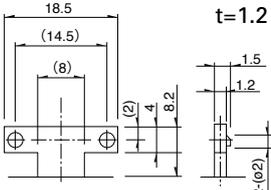
Master Type (K Fader) / Other Specifications

In addition to the products listed, we can accommodate the follow specifications.

Specifications

Type		Travel (mm)	Terminal style		Operating force	Sliding life	Micro switch
Standard type	Single-unit	60 / 100	Lead type		$0.3^{+0.3}_{-0.2}$ N	100,000 cycles	Available (100mm only)
	Dual-unit				0.4 ± 0.3 N		
CP type	Single-unit		Connector type	JST S4B-EH	0.2 ± 0.15 N	300,000 cycles	
	Dual-unit			JST S9B-EH	0.3 ± 0.2 N		

Lever Types

Configuration code	1	4	9-T (T-Bar)
Dimensions			

Total Resistance Variety

Total resistance (k Ω)	10*	50	100
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*CP type: Only 10 kΩ

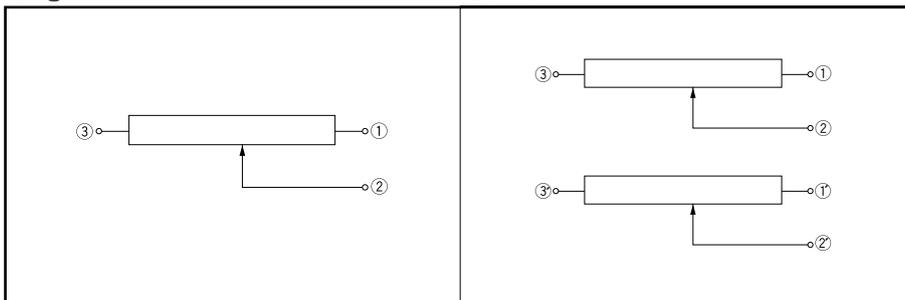
Resistance Taper

Resistance taper	15A	1B
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Circuit Diagram

Single-unit

Dual-unit



Note

Marked are specifications recommended by Alps Alpine.

When ordering product varieties that are not listed, specify referring to the examples below.

Sample Part Number

R S 6 0 K 1 1 A - 9 T - A 1 0 3

Travel

60	60mm
A0	100mm

Number of resistor elements

Single-unit	1
Dual-unit	2

Resistor element type, and presence of micro switch

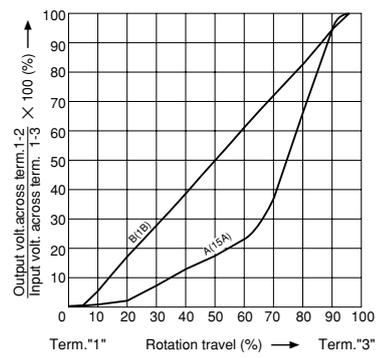
Code	Resistor elements Standard type	Code	Resistor elements CP type
A	Without micro switch	K	Without micro switch
B	With micro switch	L	With micro switch

Lever types

Code	Configuration code
01	1
04	4
9T	9-T (T-Bar)

Resistance taper

Code	Resistance taper
A	15A
B	1B



Total resistance

Code	Total resistance (k Ω)	Code	Total resistance (k Ω)
103	10	104	100
503	50	254	250

CP type: Supports 10kΩ only.

Note

Marked are specifications recommended by Alps Alpine.

Rotary Potentiometers
 Slide Potentiometers
 General-use
 Mixer

Slide Potentiometers

List of Varieties

Type		Standard Type		Master Type	Low-profile Master Type
Series		Super Slide™	Compact Reflow Type	K Fader	N Fader
		RS □□ 1	RS08U	RS □□ K	RS □□ N
		Single-unit/Dual-unit	Single-unit	Single-unit/Dual-unit	Single-unit/Dual-unit
Photo					
Travel (mm)		15, 20, 30, 45, 60	8	60, 100	
Direction of lever		Vertical		Horizontal	Vertical
Lever material		Metal / Resin	Resin	Metal	
Operating temperature range		-25°C to +70°C	-10°C to +70°C	-10°C to +60°C	
Operating life		15,000 cycles	10,000 cycles	100,000 cycles (Standard) 300,000 cycles (CP)	30,000 cycles
Available for automotive use		○	—	—	—
Life cycle (availability)					
Electrical performance	Total resistance (k Ω)	10, 20, 50, 100, 200	10	10, 50, 100 (Standard) 10 (CP)	10, 50, 100, 250
	Resistance taper	10A, 15A, 1B, 3B, 4B	1B	15A, 1B	15A, 1B, 10A
	Rated Power	Please see P.392	0.025W	0.25W	0.1W (RS60N) 0.25W (RSA0N)
	Insulation resistance	100MΩ min. 250V DC	100MΩ min. 100V DC	100MΩ min. 250V DC	
	Voltage proof	300V AC for 1 minute	100V AC for 1 minute	250V AC for 1 minute	
	Center-taps	Without / With	Without		
Mechanical performance	Operating force	0.3 to 2.5N	0.17±0.15N	Please see P.399	Single-unit: 0.3 ^{+0.5} _{-0.25} N Dual-unit: 0.4 ^{+0.5} _{-0.35} N
	Center detent	Without / With	Without		
	Stopper strength	50N	5N	100N	
	Lever push-pull strength	50N	5N	100N	50N
	Lever wobble (mm) ※ Both sides	$\frac{2(2 \times L)}{20}$	—	$\frac{2(2 \times L)}{25}$	
	Detent slip-out force	Operating force + (0.2 to 2N)	—	—	—
	Lever deviation (mm) ※ One side	0.5 max.	—	0.5 max.	0.5 max. (One side)
Terminal style		Insertion	Reflow	Lead (Standard) Connector (CP)	Insertion
Page		386	395	396	401

Slide Potentiometers Soldering Conditions	417
Potentiometer Cautions	418
Potentiometers Measurement and Test Methods	420
Potentiometers Resistance Taper	420

Notes

- "L" in the "Lever Wobble" column of the above table indicates the length of lever.
- [RS □□]  □□ indicates travel.
- Indicates applicability to some products in the series.

Reference for Manual Soldering

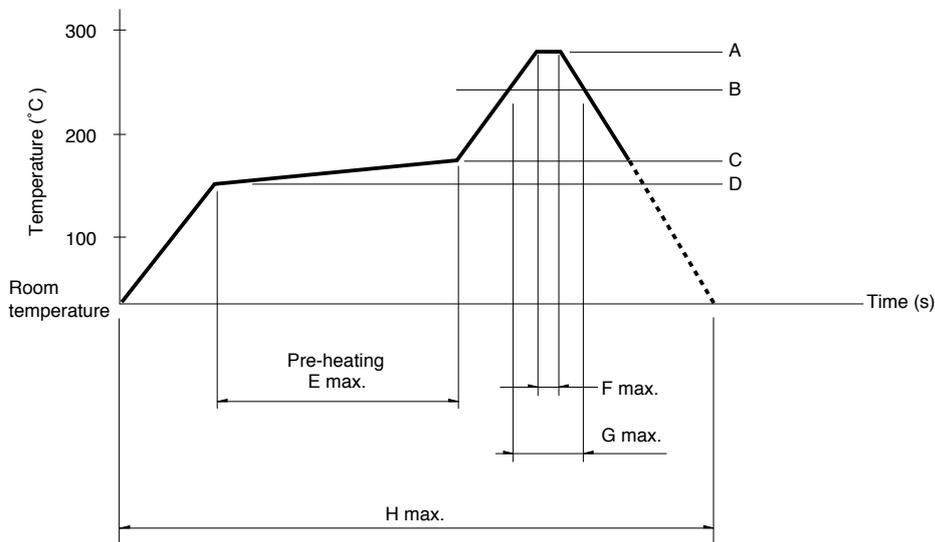
Series	Tip temperature	Duration of Soldering time	No. of solders
RS□□1, RS08U, RS□□K (Standard), RS□□N, RS□□N11S, RS6011□P, RS□□N1□M, RSA0K1□V (Motor terminal)	350°C max.	3s max.	1 time

Reference for Dip Soldering

Series	Preheating		Dip soldering		Number of soldering
	Soldering surface temperature	Heating time	Soldering temperature	Soldering time	
RS□□1, RS□□N, RS□□N11S, RS6011□P, RS□□N1□M	100°C max.	1 min. max.	260°C	5s max.	1 time

Example of Reflow Soldering Condition

Temperature profile



Series	A	B	C	D	E	F	G	H	No. of reflows
RS08U	250°C	200°C	150°C	150°C	2 min.	3s	40s	4 min.	1 time

Notes

1. When using an infrared reflow oven, solder may sometimes not be applied. Be sure to use a hot air reflow oven or a type that uses infrared rays in combination with hot air.
2. The temperatures given above are the maximum temperatures at the terminals of the products when employing a hot air reflow method. The temperature of the PC board and the surface temperature of the products may vary greatly depending on the PC board material, its size and thickness. Ensure that the surface temperature of the products does not rise to 250°C or greater.
3. Conditions vary to some extent depending on the type of reflow bath used. Be sure to give due consideration to this prior to use.

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ALPS:

[RSA0K12A1013](#) [RS60K11A9010](#) [RSA0K11A901L](#) [RSA0K11K9A16](#) [RSA0K12K9A14](#) [RSA0K11A901P](#)
[RS60K11K9A13](#) [RS60K12A-01-A103](#) [RS60K12A-01-A503](#)